

DRILL HOLES

DRILL HOLES

DRILL HOLES

BY: Aaron Hottenstein Division: P068 Highway TrafficGMA Emp

BORDER REV: DATE: March 27, 2007

PROJECT DESCRIPTION

I. GENERAL

THIS PROJECT INVOLVES THE RECONSTRUCTION OF THE TRAFFIC SIGNAL AT MD 212 AND DREXEL STREET, IN PRINCE GEORGE'S COUNTY, MARYLAND. MD 212 IS ASSUMED TO RUN IN A NORTH/SOUTH DIRECTION.

II. INTERSECTION OPERATION

THE INTERSECTION IS TO OPERATE IN A NEMA FOUR-PHASE, FULLY-ACTUATED MODE, WITH THE NORTHBOUND AND SOUTHBOUND MD 212 MOVEMENTS OPERATING CONCURRENTLY. AN EXCLUSIVE LEFT TURN PHASE IS PROVIDED FOR NORTHBOUND MD 212 WITH A RIGHT TURN OVERLAP FROM EASTBOUND DREXEL STREET. EASTBOUND DREXEL STREET OPERATES SEPARATELY.

III. PEDESTRIAN OPERATION

NAVIGATOR AUDIBLE PEDESTRIAN PUSHBUTTONS TO CROSS THE SOUTH LEG AND WEST LEG OF THE INTERSECTION ARE TO BE PROVIDED. WHEN THE PEDESTRIAN LOCATES AND PRESSES THE PUSHBUTTON FOR AN EXTENDED TIME, THE PUSHBUTTON UNIT WILL ANNOUNCE THE FOLLOWING MESSAGE:

SOUTH: "WAIT TO CROSS RIGGS AT DREXEL, WAIT."

WEST: "WAIT TO CROSS DREXEL AT RIGGS, WAIT."

SPECIAL NOTES

1. THE CONTACT PERSONS FOR THIS PROJECT ARE AS FOLLOWS:

DISTRICT

MS. FELICIA MURPHY
ASSISTANT DISTRICT ENGINEER - TRAFFIC
301-513-7404

MR. VICTOR GRAFTON
DISTRICT ENGINEER - UTILITIES
301-513-7350

MR. VERNON STINNETT JR.
ASSISTANT DISTRICT ENGINEER - MAINTENANCE
301-513-7304

OFFICE OF TRAFFIC AND SAFETY

MR. RICHARD DAFF SR.
CHIEF, TRAFFIC OPERATIONS
410-787-7630

MR. ROBERT SNYDER
ASSISTANT DIVISION CHIEF, TRAFFIC OPERATIONS
410-787-7630

MR. ED RODENHIZER
TEAM LEADER SIGNAL OPERATIONS
410-787-7650

MR. EUGENE BAILEY
TEAM LEADER SIGN OPERATIONS
410-787-7670

MR. MIKE STOCKER
SUPPLY OFFICER IV (SIGNAL SHOP WAREHOUSE)
410-787-7668

EQUIPMENT LIST

A. EQUIPMENT TO BE FURNISHED BY STATE HIGHWAY ADMINISTRATION

ITEM NO./ CAT CODE	QUANTITY	DESCRIPTION
9000	1 EA	QUICK CONNECT BLOCK AND HARNESS FOR TELEMETRY INTERFACE PANEL
9000	1 EA	UPS EQUIPMENT FOR "S" CABINET
9000	1 EA	CONTROLLER CABINET, SIZE "S" W/CONTROLLER AND VIDEO EQUIPMENT 1-8 CAMERAS
9570	11.5 SF	SHEET ALUMINUM GROUND MOUNTED SIGN R4-7, (24"x30") - 2 EA - WOOD POST MOUNTED SIGN (10 SF) R7-1, (12"x18"), WOOD POST MOUNTED - 1 EACH (1.5 SF)
9571	84.5 SF	SHEET ALUMINUM MAST ARM/POLE MOUNTED SIGN D-3(1), (16"xVAR.), MAST ARM MOUNT, DUAL FACED - 1 EACH (11 SF) R10-11b, (24"x24"), MAST ARM MOUNT - 1 EACH (4 SF) R4-7, (24"x30"), 1 WOOD POLE MOUNT, 1 BAND TO POLE - 2 EACH (10 SF) W3-3d(1), (120"x48"), MAST ARM MOUNT - 1 EACH (40 SF) M1-5(4) (78"x36"), MAST ARM MOUNT - 1 EACH (19.5 SF)

B. EQUIPMENT TO BE FURNISHED AND/OR INSTALLED BY CONTRACTOR

ITEM NO./ CAT CODE	QUANTITY	DESCRIPTION
1001	1 EA	MAINTENANCE OF TRAFFIC
2001	48 CY	CLASS 2 EXCAVATION
2002	5 CY	TEST PIT EXCAVATION
5003	270 LF	REMOVAL OF EXISTING PERMANENT PAVEMENT LINE MARKINGS
5004	340 LF	12 INCH WHITE PREFORMED THERMOPLASTIC PAVEMENT MARKING LINES
5005	135 LF	24 INCH WHITE PREFORMED THERMOPLASTIC PAVEMENT MARKING LINES
6001	265 LF	STANDARD TYPE A COMBINATION CURB AND GUTTER 12 INCH GUTTER
6002	945 SF	5 INCH CONCRETE SIDEWALK
6003	80 SF	DETECTABLE WARNING SURFACE FOR CURB RAMPS
8001	31 EA	12 INCH LED SIGNAL HEAD SECTION
8002	1 EA	2-WIRE CENTRAL CONTROL UNIT
8007	1 EA	ANY SIZE LIGHTING ARM ON SIGNAL POLE WITH 250 WATT HPS
8008	4 EA	AUDIBLE/TACTILE PEDESTRIAN PUSHBUTTON STATION AND SIGNS
8009	3 EA	BREAKAWAY PEDESTAL POLE (ANY SIZE)
8012	1 EA	EMBEDDED METEDED SERVICE PEDESTAL WITH BYPASS SWITCH
8015	4 EA	LED 16 INCH COUNTDOWN PEDESTRIAN SIGNAL HEAD
8019	2 EA	MAST ARM POLE AND 60 FOOT MAST ARM ANY 'T' DIMENSION
8022	6 EA	NONINVASIVE DETECTOR (ANY LENGTH) LEAD IN CABLE UP TO 1000'
8023	1 EA	REMOVE AND DISPOSE OF EQUIPMENT (PER ASSIGNMENT)
8026	1 EA	TWIN MAST ARM POLE AND 50 FOOT/ 70 FOOT MAST ARMS ANY 'T' DIMENSION
8028	2 EA	VIDEO DETECTION CAMERA AND CABLE ANY LENGTH
8030	400 LF	1-CONDUCTOR ELECTRICAL CABLE, NO. 2 AWG/THHN

ENGINEERS
PLANNERS
SCIENTISTS
CONSTRUCTION MANAGERS

KCI
TECHNOLOGIES

936 RIDGEBROOK ROAD
SPARKS, MARYLAND 21152
TELEPHONE: (410) 316-7800
FAX: (410) 316-7818

EQUIPMENT LIST CONTINUED.

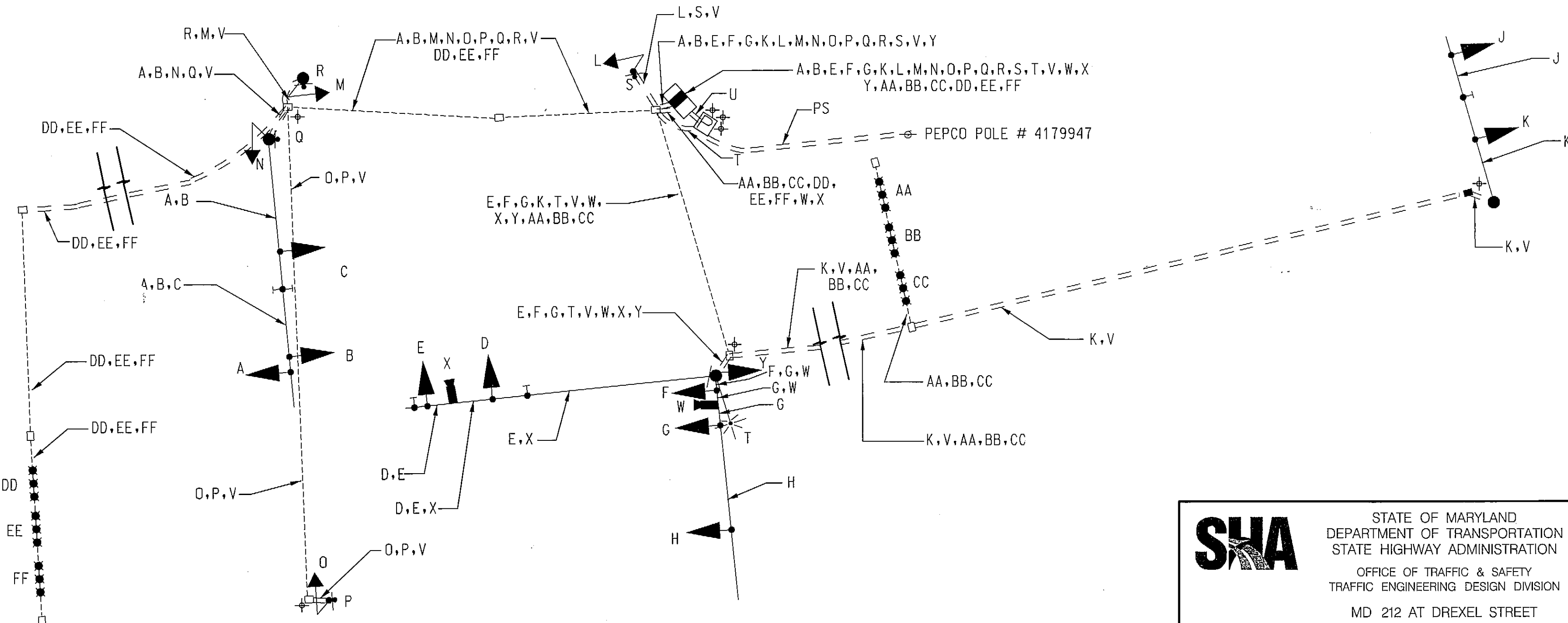
B. EQUIPMENT TO BE FURNISHED AND/OR INSTALLED BY CONTRACTOR

ITEM NO./ CAT CODE	QUANTITY	DESCRIPTION
8034	120 LF	ELECTRICAL CABLE - 2 CONDUCTOR (NO. 12 AWG) TYPE T/C
8039	1370 LF	UP TO 4 INCH SCHEDULE 80 RIGID PVC CONDUIT - TRENCHED
8040	60 LF	WOOD SIGN SUPPORTS UP TO 4'X6'
8041	96 SF	INSTALL OVERHEAD OR GROUND MOUNTED SIGN (INCLUDING ALL HARDWARE)
8043	830 LF	NO. 6 AWG STRANDED BARE COPPER GROUND WIRE
8046	50 LF	ELECTRICAL CABLE 1-CONDUCTOR NO. 8 AWG-THHN/THWN
8047	4 EA	FURNISH AND INSTALL ELECTRICAL HANDHOLE
8054	525 LF	ELECTRICAL CABLE - 2 CONDUCTOR (NO. 14 AWG)
8056	2300 LF	ELECTRICAL CABLE - 5 CONDUCTOR (NO. 14 AWG)
8057	1000 LF	ELECTRICAL CABLE - 7 CONDUCTOR (NO. 14 AWG)
8063	1 EA	INSTALL CONTROLLER AND CABINET BASE MOUNT (ANY SIZE)

C. SHA FORCES SHALL REMOVE THE CONTROLLER AND ALL AUXILIARY EQUIPMENT FROM THE CONTROLLER CABINET, THE CABINET AND ALL OTHER MATERIALS TO BE REMOVED BY THE CONTRACTOR SHALL BECOME THE PROPERTY OF THE CONTRACTOR.

WIRING KEY

A,B,E,F,G,Y	7- CONDUCTOR ELECTRICAL CABLE (NO. 14 AWG)
C,D,H,J,K,L,M,N,O	5- CONDUCTOR ELECTRICAL CABLE (NO. 14 AWG)
P,Q,R,S	2- CONDUCTOR ELECTRICAL CABLE (NO. 14 AWG)
T	2- CONDUCTOR ELECTRICAL CABLE (NO. 12 AWG), TRAY CABLE
U	ELECTRICAL CABLE 3- 1- CONDUCTOR NO. 8 AWG-THHN/THWN
PS	POWER SOURCE, 1-CONDUCTOR ELECTRICAL CABLE, NO. 2 AWG/THHN
V	STRANDED BARE COPPER GROUND WIRE, NO. 6 AWG
W,X	VIDEO DETECTION CONTROL CABLE
AA,BB,CC,DD,EE,FF	NON-INVASIVE MICROLOOP PROBE



PHASE CHART

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
PHASE 1 AND 6	◀-R	◀-R	R	R	R	R	R	R	R	Y	Y	◀-R	◀-R	◀-R	◀-R
1 AND 6 CHANGE	◀-Y	◀-Y	G	G	R	R	R	R	R	Y	Y	◀-R	◀-R	◀-R	◀-R
PHASE 2 AND 6	◀-R	◀-R	G	G	G	G	R	R	R	DARK	DARK	DW	DW	DW	DW
2 AND 6 CHANGE	◀-R	◀-R	Y	Y	Y	Y	Y	R	R	FLY	FLY	DW	DW	DW	DW
ALT PHASE 2 AND 6	◀-R	◀-R	G	G	G	G	R	R	R	DARK	DARK	W	W	DW	DW
PED CLEARANCE	◀-R	◀-R	G	G	G	G	R	R	R	DARK	DARK	FDW	FDW	DW	DW
ALT 2 AND 6 CHANGE	◀-R	◀-R	Y	Y	Y	Y	Y	R	R	FLY	FLY	DW	DW	DW	DW
PHASE 4	◀-R	◀-R	R	R	R	R	R	G	G	FLY	FLY	DW	DW	DW	DW
4 CHANGE	◀-R	◀-R	R	R	R	R	R	Y	Y	FLY	FLY	DW	DW	DW	DW
ALT PHASE 4	◀-R	◀-R	R	R	R	R	R	G	G	FLY	FLY	DW	DW	W	W
PED CLEARANCE	◀-R	◀-R	R	R	R	R	R	G	G	FLY	FLY	DW	DW	FDW	FDW
ALT 4 CHANGE	◀-R	◀-R	R	R	R	R	R	Y	Y	FLY	FLY	DW	DW	DW	DW
FLASHING OPERATION	FL/R	FL/R	FL/Y	FL/Y	FL/Y	FL/Y	FL/Y	FL/R	FL/R	DARK	DARK	DARK	DARK	DARK	DARK

* SIGNALS 10 AND 11 FLASH ALTERNATELY WHEN ACTIVATED.

WIRING DIAGRAM

TOD NO: XX655-23
SHA NO: PG371859
MD 212 @ Drexel Street

SHA

STATE OF MARYLAND
DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION
OFFICE OF TRAFFIC & SAFETY
TRAFFIC ENGINEERING DESIGN DIVISION
MD 212 AT DREXEL STREET
CHILLUM, MARYLAND

GENERAL INFORMATION SHEET

SCALE NA ADVERTISED DATE NA CONTRACT NO. XX6555185

DESIGNED BY AFAMH COUNTY PRINCE GEORGE'S

DRAWN BY AFRB LOGMILE 16021201.94

CHECKED BY JFL TMS NO. K751

F.A.P. NO. NA TOD NO. NA

TS NO. 409 C DRAWING **SG-3** OF 3 SHEET NO. 3 OF 3

PLOTTED: "11:07 AM on Wednesday, May 09, 2012"
FILE: M:\2009\0109\018.27\drawings\p25G-N000_MD212.dgn